

about about

Now we get the lost element

$$Z_{out} = W_{out} A_1 + \text{about}$$
$$\frac{\partial Z}{\partial p} \rightarrow [1 \quad 1]$$

same as in $\frac{\partial \text{loss}}{\partial w_1}$

$$\frac{\partial \text{loss}}{\partial w_1} = \frac{\text{loss} \cdot \frac{\partial \text{out}}{\partial A_{out}}}{\frac{\partial \text{out}}{\partial A_1}} = \frac{\text{loss} \cdot \frac{\partial \text{out}}{\partial A_{out}}}{\frac{\partial \text{out}}{\partial A_1}} \cdot \frac{\partial A_{out}}{\partial A_1} \cdot \frac{\partial A_1}{\partial w_1}$$

(3b)

$$\begin{array}{c} \left[\begin{array}{cc} 9 & 0 \\ -3 & 0 \end{array} \right] \cdot \left[\begin{array}{c} 1 \\ 1 \end{array} \right] = \left[\begin{array}{c} 9 \\ -3 \end{array} \right] \\ \Downarrow \\ \left[\begin{array}{cc} 6 & 0 \\ 0 & 0 \end{array} \right] \cdot \left[\begin{array}{c} 1 \\ 1 \end{array} \right] = \left[\begin{array}{c} 6 \\ 0 \end{array} \right] \end{array}$$